

SOAP BUBBLES IN PAINTINGS: ART AND SCIENCE, F. Behroozi, University of Northern Iowa,
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Soap bubbles became popular in the 17th century paintings and prints primarily as a metaphor to convey the impermanence and fragility of life. A good example is *The Dancing Couple*, by the Dutch painter Jan Steen (1625-1679) in which, among many other symbols, a young boy is shown blowing soap bubbles. In the 18th century the French painter Jean-Simeon Chardin (1699-1779) used soap bubbles not only to portray the impermanence of life but also to convey a sense of play and wonder. In his most famous painting, *Soap Bubbles* (1734) a translucent and quavering soap bubble takes center stage. Chardin's contemporary Charles Van Loo (1719-1795) painted his *Soap Bubbles* (1764) in rococo style. In both paintings the soap bubble has a hint of color and shows two bright reflection spots.

We will discuss briefly the physics involved and show how keenly the painters have observed the interaction of light and soap bubbles. Furthermore, we will show that the two reflection spots on the soap bubble are images of the light source, one real and one virtual, formed by the curved surface of the bubble. The faint colors are due to thin film interference effects.